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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CHUNG-SHENG LI and MAHMOUD NAGHSHINEH

Appeal 2009-003980
Application 09/896,584
Technology Center 3600

Decided: August 10, 2009

Before MURRIEL E. CRAWFORD, HUBERT C. LORIN, and ANTON W. FETTING, *Administrative Patent Judges.*

FETTING, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Chung-Sheng Li and Mahmoud Naghshineh (Appellants) seek review under 35 U.S.C. § 134 (2002) of a non-final rejection of claims 1-4, 7-10, 13, 15-18, and 21-26, the only claims pending in the application on appeal. We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6(b) (2002).

SUMMARY OF DECISION[1]

We AFFIRM.

THE INVENTION

The Appellants invented a method and an apparatus to automate inventory replenishing techniques which employ remote sensors for collecting information, and brokers for aggregating and deaggregating of the collected information and for leveraging conditions associated with an electronic market place (Specification 1:9-13).

An understanding, of the invention, can be derived from a reading of exemplary claims 1 and 10, which are reproduced below [bracketed matter and some paragraphing added].

> 1. A computer-based method of automatically controlling an inventory of items, the method comprising the steps of:

[1] Our decision will make reference to the Appellants' Appeal Brief ("App. Br.," filed February 21, 2008) and Reply Brief ("Reply Br.," filed June 23, 2008), and the Examiner's Answer ("Ans.," mailed June 23, 2008), and Final Rejection ("Final Rej.," mailed September 25, 2007).

[1] at least one broker device automatically collecting information relating to a status associated with at least one inventory item from one or more sources;
[2] the at least one broker device automatically accessing at least one electronic marketplace, wherein the electronic marketplace comprises an electronic trading network site, the broker device accessing the electronic marketplace in order to:
(1) obtain information to determine one or more optimal parameters, based on the collected status information, to be used for replenishing the at least one inventory item via the at least one electronic marketplace; and
(2) order a quantity of the inventory item via the electronic marketplace from a provider of the inventory item; and
[3] the at least one broker device one of aggregating and deaggregating multiple orders for the inventory item associated with the one or more sources so as to minimize an overall purchasing cost attributable to the multiple orders.

10. The method of claim 1, further comprising the step of automatically generating a recommendation of at least one of a different brand and a different type of an item to a consumer of the inventory.

THE REJECTIONS

The Examiner relies upon the following prior art:

Salvo et al.	US 6,341,271 B1	Jan. 22, 2002
Shkedy	US 6,260,024 B1	Jul. 10, 2001
Whiteis	US 5,749,081	May 5, 1998

Claims 1-4, 7-9, 13, 15-18, 21-23, 25, and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Salvo and Shkedy.

Claims 10 and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Salvo, Shkedy, and Whiteis.

ARGUMENTS

Claims 1-4, 7-9, 13, 15-18, 21-23, 25, and 26 rejected under 35 U.S.C. § 103(a) as being unpatentable over Salvo and Shkedy

The Appellants argue these claims as a group.

Accordingly, we select claim 1 as representative of the group. 37 C.F.R. § 41.37(c)(1)(vii) (2008).

The Examiner found that Salvo describes all of the limitations of claim 1, except for the limitations of an electronic market place. Where the electronic market place comprises an electronic trading network site, ordering a quantity of inventory via the electronic market place, and the at least one broker device, which for aggregating and deaggregating multiple orders in the inventory, to minimize an overall purchasing cost attributable to the multiple orders. Answer 4-5. The Examiner found that Shkedy describes these features. Answer 5. The Examiner further found that a person with ordinary skill in the art would have recognized the benefit of obtaining the best price by buying in larger quantities and a person with ordinary skill in the art would have found it obvious to combine Salvo and Shkedy. Answer 5-6.

The Appellants contend that (1) Salvo cannot teach any of the claimed limitations, without disclosing an electronic marketplace and thus the Examiner's rejection resembles a hindsight-based, piecemeal analysis with no motivation to combine the prior art, as per independent claims 1, 15, and 25 (App. Br. 7-10 and Reply Br. 2-4); (2) Shkedy fails to remedy the

deficiencies of Salvo, discussed *supra* and Shkedy further fails to describe a broker device which aggregates and deaggregates multiple orders for the inventory item associated with the one or more sources in order to minimize an overall purchasing cost attributable to multiple orders, as required per limitation [3] (App. Br. 8-9 and Reply Br. 4-5), and (3) Salvo fails to describe the limitations recited in claims 2-4 and 16-18. Appeal Brief 11.

Claims 10 and 24 rejected under 35 U.S.C. § 103(a) as being unpatentable over Salvo, Shkedy, and Whiteis

The Appellants argue these claims as a group.

Accordingly, we select claim 10 as representative of the group.

The Examiner found that Salvo and Shkedy fail to describe the step of automatically generating a recommendation of at least one of a different brand and different type of an item to a consumer of the inventory. Answer 8. The Examiner found that Whiteis describes this feature. Answer 8. The Examiner further found that a person with ordinary skill in the art would have recognized the benefit of increasing the likelihood of a sale by providing an accurate and subjective recommendation when providing a recommendation of a different brand and different type. Answer 8. The Examiner also found that a person with ordinary skill in the art would have found it obvious to combine Salvo, Shkedy, and Whiteis. Answer 8.

The Appellants contend that (1) Salvo and Shkedy fail to describe all of the limitations of claims 1, 15, and 22, as discussed *supra* (App. Br. 11-12), (2) Whiteis fails to cure the deficiencies of Salvo and Shkedy, as discussed *supra* (App. Br. 12), and (3) there is no motivation to combine Salvo, Shkedy, and Whiteis. Appeal Brief 12.

ISSUES

The issues pertinent to this appeal are (1) whether the Appellants have sustained their burden of showing that the Examiner erred in rejecting claims 1-4, 7-9, 13, 15-18, 21-23, 25, and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Salvo and Shkedy and (2) whether the Appellants have sustained their burden of showing that the Examiner erred in rejecting claims 10 and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Salvo, Shkedy, and Whiteis. The pertinent issues turn on whether Salvo and Shkedy describe all of the limitation of claims 1, 15, and 22 and whether there is motivation to combine the prior art.

FACTS PERTINENT TO THE ISSUES

The following enumerated Findings of Fact (FF) are believed to be supported by a preponderance of the evidence.

Facts Related to Appellants' Disclosure

01. Aggregating purchase orders enables clients to realize the cost benefits of volume purchasing (Specification 9:21-23). Deaggregating purchase orders may enable the advantages of purchasing opportunities in smaller quantities (Specification 9:23-24).

Facts Related to the Prior Art

Salvo

02. Salvo is directed to a vendor-managed inventory system and method. Salvo 1:7-8. The inventory management system permits monitoring and determining real-time status of storage receptacles and the automatic

ordering of inventory to replenish the receptacles at the lowest possible price. Salvo 3:42-48. The inventory monitoring permits historical analysis of inventory use, evaluation of inventory usage, automation and suggestions for a vendor's manufacturing schedule. Salvo 3:48-52. The inventory monitoring also permits the prediction of future inventory usage, including forecasting based on trends and economic indicators. Salvo 3:52-56.

03. The inventory ordering considers many factors, including historical inventory usage trends, real-time needs, economic models, pricing models, information concerning estimated future needs and changes, inventory supply time, and comparative pricing and purchasing ability. Salvo 3:57-62.

04. The inventory management system interacts with and connects to inventory price sources. Salvo 3:65-66 and 6:7-9. The control unit of the system is provided with information for analyzing inventory purchase prices from different vendors. Salvo 6:47-49. The control unit is able to determine the lowest available price for the inventory. Salvo 6:7-9. The control unit analyzes price information to determine when inventory price is close to historical highs and lows and is able provide the opportune time to purchase items. Salvo 6:20-24. The control unit is further connected to shipping information in order to include shipping parameters when determining total inventory price, such as size and type of vehicles available and restrictions on shipping when considering hazardous or perishable items. Salvo 6:28-29 and 6:41-46.

Shkedy

05. Shkedy is directed to a system and method for facilitating a transaction between a plurality of buyers, an intermediary, and a plurality of sellers over an electronic network. Shkedy 1:9-13.

06. The system aggregates individual buyer's purchase orders into collective purchase orders and solicits sellers to bid on the collective purchase orders. Shkedy 4:48-51. A buyer enters a forward purchase order (FPO) and each buyer order is added to a pooled purchase order (PPO). Shkedy 5:10-15 and 6:1-3. The central controller publishes the PPO, making it is accessible by potential sellers, such as on a website on the internet. Shkedy 6:3-6. The seller then communicates an intention to bid to the central controller. Shkedy 6:18-20.

Whiteis

07. Whiteis is directed to a system and method of recommending items to a user. Whiteis 1:7-9.

08. Whiteis makes recommendations to a user that are based on other items previously sampled by a user for which the user had a positive reaction. Whiteis 2:1-3.

Facts Related To The Level Of Skill In The Art

09. Neither the Examiner, nor the Appellants has addressed the level of ordinary skill in the pertinent art inventory management. We will therefore consider the cited prior art as representative of the level of ordinary skill in the art. *See* Okajima v. Bourdeau, 261 F.3d 1350, 1355 (Fed. Cir. 2001) ("[T]he absence of specific findings on the level of skill in the art does not

give rise to reversible error 'where the prior art itself reflects an appropriate level and a need for testimony is not shown'") (*quoting Litton Indus. Prods., Inc. v. Solid State Sys. Corp.*, 755 F.2d 158, 163 (Fed. Cir. 1985).

Facts Related To Secondary Considerations

10. There is no evidence on record of secondary considerations of non-obviousness for our consideration.

PRINCIPLES OF LAW

Obviousness

A claimed invention is unpatentable if the differences between it and the prior art are "such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art." 35 U.S.C. § 103(a) (2000); *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007); *Graham v. John Deere Co.*, 383 U.S. 1, 13-14 (1966).

In Graham, the Court held that that the obviousness analysis is bottomed on several basic factual inquiries: "[(1)] the scope and content of the prior art are to be determined; [(2)] differences between the prior art and the claims at issue are to be ascertained; and [(3)] the level of ordinary skill in the pertinent art resolved." 383 U.S. at 17. *See also KSR*, 550 U.S. at 406. "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *KSR*, 550 U.S. at 416.

ANALYSIS

Claims 1-4, 7-9, 13, 15-18, 21-23, 25, and 26 rejected under 35 U.S.C. § 103(a) as being unpatentable over Salvo and Shkedy

The Appellants first contend that, (1) Salvo cannot teach any of the claimed limitations without disclosing an electronic marketplace, and (2)the Examiner's rejection resembles hindsight based on a piecemeal analysis of the prior art, as per independent claims 1, 15, and 25. Appeal Brief 7-8 and Reply Br. 2-4. The Appellants further contend that the Examiner failed to provide sufficient motivation to combine Salvo and Shkedy. Appeal Brief 9-10 and Reply Br. 3-4. We disagree with the Appellants.

Claim 1 requires a broker device accessing an electronic marketplace and the marketplace comprises an electronic trading network. Claim 1 further requires the broker device to obtain information to determine optimal parameters to replenish an inventory item and order a quantity of the item. Salvo describes a broker that connects to a plurality of pricing sources, where the broker obtains information used to optimize the inventory management and can order items from a vendor of the item for inventory. FF 02, FF 03, and FF 04.

Salvo describes limitations [1] and [2] of claim 1, except for the requirement to access a marketplace. As noted, by the Examiner, Salvo does not describe a marketplace as defined by the claimed invention.

Shkedy describes publishing purchase orders to a marketplace that enables sellers to bid on the purchase orders. FF 06. Shkedy further describes limitation [3] (discussed infra.

Both Salvo and Shkedy are concerned with solving the problem of procuring items at optimal costs. FF02 and FF 05. Salvo accomplishes this

by monitoring inventory parameters and market prices and then determines an optimal time to purchase inventory items. FF 03 and FF 04. Shkedy accomplishes this by aggregating purchase orders in order to receive a better price for purchasing items in greater quantities. FF 06.

A person with ordinary skill in the art would have recognized the benefit of lower purchasing costs by aggregating purchase orders. As such, a person with ordinary skill in the art would have found it obvious to combine this feature described by Shkedy with Salvo, in order to obtain a better price for items in inventory. Salvo accesses vendor pricing sources (FF 04) and as such, a person with ordinary skill in the art would have a reasonable expectation of success in using Salvo to access a marketplace as described by Shkedy. Hence, the Examiner properly found that these elements were known to a person with ordinary skill in the art at the time of the claimed invention and therefore, did not perform a hindsight-based piecemeal analysis of the prior art.

The Appellants also contend that (2) Shkedy fails to remedy the deficiencies of Salvo, discussed *supra*. Appeal Brief 8-9. We disagree with the Appellants. The Examiner has not relied on Shkedy to describe the limitations the Appellants allege Salvo is deficient in describing. As such, this contention does not persuade us of error on the part of the Examiner because the Appellants respond to the rejection by attacking the references separately, even though the rejection is based on the combined teachings of the references. Nonobviousness cannot be established by attacking the references individually when the rejection is predicated upon a combination of prior art disclosures. *See In re Merck & Co. Inc.*, 800 F.2d 1091, 1097, (Fed. Cir. 1986).

The Appellants further contend that Shkedy fails to describe at a broker device, one of aggregating and deaggregating multiple orders for the inventory item associated with the one or more sources so as to minimize an overall purchasing cost attributable to multiple orders, as required per limitation [3] of claim 1. Appeal Brief 8-9 and Reply Br. 4-5. The Appellants specifically contend that Shkedy is silent as to deaggregating orders so as to minimize an overall purchasing cost. Appeal Brief 9. We disagree with the Appellants.

Limitation [3] requires one of aggregating and deaggregating orders, in order to minimize a purchasing cost. The broker must either aggregate or deaggregate orders. The Specification defines aggregating as, the combining of orders to realize the benefits of volume purchasing, and deaggregating as, reducing the quantity of an item to be purchased. FF 01. Shkedy describes that buyers create orders and can select a pool to join their purchase order, in order to receive a better price. FF 06. The buyer's purchase order is aggregated with other purchase orders increasing the volume. Shkedy further describes that the pooled purchase orders (PPO) are available for sellers to bid on and the seller with the best bid is awarded the PPO. FF 06. As such, Shkedy does address aggregating and deaggregating orders.

The Appellants further contend that (4) Salvo fails to describe the limitations recited in claims 2-4 and 16-18. Appeal Brief 11. We disagree with the Appellants.

Salvo describes monitoring pricing information for an inventory item, as per claims 2 and 16 (FF 02 and FF 03); Salvo describes an optimal parameter for inventory supply time, including restrictions on perishable items, as per claims 3 and 17 (FF 02 and FF 03); and Salvo describes total

inventory at a lower purchase price, as per claims 4 and 18. FF 02 and FF 03. The Appellants have failed to provide any further arguments or rationale as to why the Examiner erred in rejecting these claims.

The Appellants have not sustained their burden of showing that the Examiner erred in rejecting claims 1-4, 7-9, 13, 15-18, 21-23, 25, and 26 under 35 U.S.C. § 103(a) as unpatentable over Salvo and Shkedy.

Claims 10 and 24 rejected under 35 U.S.C. § 103(a) as being unpatentable over Salvo, Shkedy, and Whiteis

The Appellants first (1) rely on their arguments in support of claims 1, 15, and 25 above, which we did not find to be sufficient to overcome the Appellants' burden *supra* and so do not find these arguments sufficient here.

The Appellants further contend that (2) Whiteis fails to cure the deficiencies of Salvo and Shkedy, discussed *supra*. Appeal Brief 12. We disagree with the Appellants.

The Examiner has not relied on Whiteis; to describe the limitations the Appellants allege Salvo and Shkedy are deficient in describing. As such, the Appellants' contention does not persuade us of error on the part of the Examiner because the Appellants respond to the rejection by attacking the references separately, even though the rejection is based on the combined teachings of the references. "Nonobviousness cannot be established by attacking the references individually when the rejection is predicated upon a combination of prior art disclosures." *See In re Merck & Co. Inc.*, 800 F.2d 1091, 1097, (Fed. Cir. 1986).

The Appellants also contend that (3) there is no motivation to combine Salvo, Shkedy, and Whiteis. Appeal Brief 12. We disagree with

the Appellants. Salvo and Shkedy are concerned with the procurement of items and solve these concerns, as discussed *supra*. Whiteis is also concerned with sale/purchase of items. FF 07. Whiteis accomplishes this by making recommendations to a user based on the user's reactions to previously viewed items. FF 08. A person with ordinary skill in the art would have recognized the benefit of matching buyers to items they prefer in order to increase the likelihood of a sale. As such, a person with ordinary skill in the art would have been lead to combine the features of recommending items to a user based on a user's preferences as described by Whiteis with Salvo and Shkedy in order to increase the likelihood of a sale/purchase of an item.

The Appellants have not sustained their burden of showing that the Examiner erred in rejecting claims 10 and 24 under 35 U.S.C. § 103(a) as unpatentable over Salvo, Shkedy, and Whiteis.

CONCLUSIONS OF LAW

The Appellants have not sustained their burden of showing that the Examiner erred in rejecting claims 1-4, 7-9, 13, 15-18, 21-23, 25, and 26 under 35 U.S.C. § 103(a) as being unpatentable over Salvo and Shkedy.

The Appellants have not sustained their burden of showing that the Examiner erred in rejecting claims 10 and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Salvo, Shkedy, and Whiteis.

DECISION

To summarize, our decision is as follows.

- The rejection of claims 1-4, 7-9, 13, 15-18, 21-23, 25, and 26 under 35 U.S.C. § 103(a) as being unpatentable over Salvo and Shkedy is sustained.
- The rejection of claims 10 and 24 under 35 U.S.C. § 103(a) as being unpatentable over Salvo, Shkedy, and Whiteis is sustained.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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